COUNTERING IEDs AND OTHER EXPLOSIVE HAZARDS

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The defence Research and Development programme V1318 'Countering IEDs and other explosive hazards' will extend the knowledge base on methods and techniques to counter improvised explosive devices (IEDs) and other explosive hazards, such as land mines. The emphasis is on applications suitable in expeditionary land operations, including complex environments as urban areas and confined spaces. The results of the programme will enable the Armed Forces to operate safer, faster and better in environments with a threat of IEDs and other explosive hazards.

INTRODUCTION

Protection of own personnel and material against improvised explosive devices is one of the focus areas for the Netherlands Ministry of Defence in the coming years. It is not possible to make a clear distinction between IEDs and other explosive hazards such as landmines and unexploded ordnance (UXO), since IEDs are often simply constructed from the latter. A number of measures are taken to protect own personnel and material against explosive threats, including the establishment of a permanent joint C-IED organization within the Ministry of Defence. The joint C-IED organization will stimulate the increase of innovative, operational C-IED capacities and will guide the extension of the knowledge base on countering explosive threats, in close collaboration with other centers of expertise, such as Military Engineering, Explosive Ordnance Disposal, Maneuver, etc. Countering IEDs and other explosive hazards consists of several domains which are included in the pillars of the NATO doctrine. An integrated approach is essential, in which not only the IED itself is countered (Defeat the Device), but the IED Network is also attacked (Attack the Network).

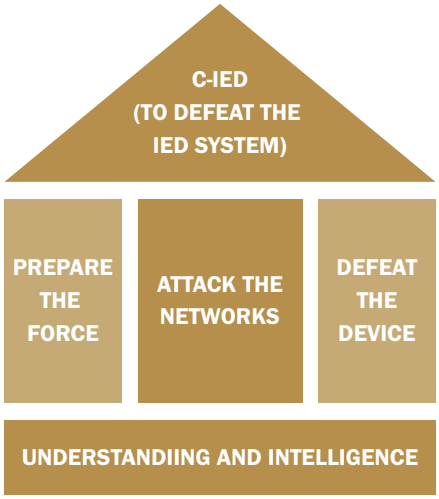
OBJECTIVES

This programme maintains and extents the knowledge base on methods and techniques for countering IEDs and other explosive hazards, and can be regarded as a broadened continuation of the programme V922 'Countering explosives'. An important extension with respect to the previous programme is the addition of methods and techniques to map and understand IED-networks.

SCOPE OF WORK

In this Research and Development programme the following 5 topics are covered.

1 *Stand-off detection and Route clearance.* In this work package techniques for detection, preferably stand-off, confirmation and identification of IEDs and other explosives are assessed for dismounted and mounted deployment. This assessment includes the application of the techniques in complex environments. Possibilities for enhancement of these techniques are investigated. Combinations of techniques for mounted detection in future route clearance operations are considered, as well as the effects on platforms, protection measures, operators, etc.
2 *Countering suicide IEDs.* Techniques for primarily the detection and secondary the neutralization of suicide IEDs, personal- and vehicle-borne IEDs are investigated and the possibilities of enhancement are studied.



3 *Neutralisation of Home-Made Explosives (HMEs).* Techniques for the flegmatization of HMEs (i.e. treatment that makes handling of these explosives safe) are assessed, enhanced and made suitable for stand-off application. Methods to establish the success of the flegmatization process are studied.
4 *Understanding IED-networks.* Ways and means to map and understand IED-networks are investigated in the framework of a Task Group under NATO's Science and Technology Organization. Possibilities for enhancement of exploitation, biometrics, forensics and chemical analysis techniques are studied.
5 *Bencharking of Search equipment.* Procedures for benchmarking handheld detection equipment are established in order to assess the performance of these detectors. The benchmarking results make performance comparison possible.

APPLICABILITY

The results of this programme will support the procurement of future material for countering IEDs and other explosive hazards, and the optimum use and deployment of this material.

PROGRAMME INFORMATION

Supervisor:
KLTZ Bas Bruins, JTF C-IED

Manager:
Dr. Arnold Schoolderman, TNO

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Countering IEDs and other explosive hazards

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